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AMSAT NEWS SERVICE
ANS-169

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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ANS-169 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 169.01
>From AMSAT HQ KENSINGTON, MD.
June 18, 2017
To All RADIO AMATEURS
BID: $ANS-169.01

2017 Candidates for the AMSAT-NA Board of Directors Announced

The 2017 candidates, in alphabetical order by last name are:

Jerry Buxton, N0JY
Clayton Coleman, W5PFG
Drew Glasbrenner, KO4MA
Peter Portanova, W2JV
Paul Stoetzer, N8HM

This year AMSAT-NA will be electing four voting members of the Board of Directors. These will go to the four candidates receiving the highest number of votes. In addition, there will be one alternate chosen, based on the next highest number of votes received.

Ballots will be mailed to the AMSAT-NA membership by July 15, 2017 and must be received at the AMSAT office by September 15, 2017 in order to

be counted. Those sent outside North America will go by air mail. If you have not received your ballot package in a reasonable time for your location, please contact the AMSAT office. Completed ballots should be returned as promptly as possible, and those from outside North America preferably by air mail.

Election of Board members is both an obligation as well as an opportunity by our membership to help shape the future direction of AMSAT. Please take the time to review the candidate statements that will accompany the ballot and determine who you wish to see on the Board. You have the option to vote for up to four candidates.

[ANS thanks AMSAT Office for the above information]

2017 AMSAT Field Day Rules

It's that time of year again; summer and Field Day! Each year the American Radio Relay League (ARRL) sponsors Field Day as a "picnic, a campout, practice for emergencies, an informal contest and, most of all, FUN!" The event takes place during a 24-hour period on the fourth weekend of June. For 2017 the event takes place during a 27-hour period from 1800 UTC on Saturday June 24, 2017 through 2100 UTC on Sunday June 25, 2017. Those who set up prior to 1800 UTC on June 24 can operate only 24 hours. The Radio Amateur Satellite Corporation (AMSAT) promotes its own version of Field Day for operation via the amateur satellites, held concurrently with the ARRL event.

This year should be easier than many years since we have about 10 transponders and repeaters available, with more possible before Field Day. Users should check the AMSAT status page at http://www.amsat.org/status/ and the pages at http://www.amsat.org/?page_id=177 for what is available in the weeks leading up to field day. To reduce the amount of time to research each satellite, see the current FM satellite table at http://www.amsat.org/?page_id=5012 and the current linear satellite table at http://www.amsat.org/?page_id=5033

If you are considering ONLY the FM voice satellites like SO-50 for your AMSAT Field Day focus, do not, unless you are simply hoping to make one contact for the ARRL rules bonus points. The congestion on FM LEO satellites is always so intense that we must continue to limit their use to one-QSO-per-FM-satellite. This includes the International Space Station. You will be allowed one QSO if the ISS is operating Voice.

It was suggested during past field days that a control station be allowed to coordinate contacts on the FM satellites. There is nothing in the rules that would prohibit this. This is nothing more than a single station working multiple QSO's. If a station were to act as a control station and give QSO's to every other field day station, the control station would still only be allowed to turn in one QSO per FM satellite while the other station would be able to submit one QSO.

The format for the message exchange on the ISS or other digital packet satellite is an unproto packet to the other station (3-way exchange required) with all the same information as normally exchanged for ARRL Field Day,
e.g.:
W6NWG de KK5DO 2A STX

KK5DO de W6NWG QSL 5A SDG
W6NWG de KK5DO QSL

If you have worked the satellites on Field Day in recent years, you may have noticed a lot of good contacts can be made on some of the less-populated, low-earth-orbit satellites like FO-29, AO-7, AO-73, NAYIF-1 or the XW satellites. During Field Day the transponders come alive like 20 meters on a weekend. The good news is that the transponders on these satellites will support multiple simultaneous contacts. The bad news is that you can't use FM, just low duty-cycle modes like SSB and CW.

THE 2017 AMSAT FIELD DAY RULES

The AMSAT Field Day 2017 event is open to all Amateur Radio operators. Amateurs are to use the exchange as specified in ARRL rules for Field Day. The AMSAT competition is to encourage the use of all amateur satellites, both analog and digital. Note that no points will be credited for any contacts beyond the ONE allowed via each single-channel FM satellite. Operators are encouraged not to make any extra contacts via theses satellites (Ex: SO-50). CW contacts and digital contacts are worth three points as outlined below.

1. Analog Transponders

ARRL rules apply, except:

- Each phone, CW, and digital segment ON EACH SATELLITE TRANSPONDER is considered to be a separate band.

- CW and digital (RTTY, PSK-31, etc.) contacts count THREE points each.

- Stations may only count one (1) completed QSO on any single channel FM satellite. If a satellite has multiple modes such as V/u and L/s modes both turned on, one contact each is allowed. If the PBBS is on - see Pacsats below, ISS (1 phone and 1 digital), Contacts with the ISS crew will count for one contact if they are active. PCSat (I, II, etc.) (1 digital),

- The use of more than one transmitter at the same time on a single satellite transponder is prohibited.

2. Digital Transponders

We have only APRS digipeaters and 10m to 70cm PSK transponders (see Bob Bruninga's article in the March/April, 2016 issue of the AMSAT Journal).

Satellite digipeat QSO's and APRS short-message contacts are worth three points each, but must be complete verified two-way exchanges. The one contact per FM satellite is not applied to digital transponders.

The use of terrestrial gateway stations or internet gateways (i.e. EchoLink, IRLP, etc.) to uplink/downlink is not allowed.

Sample Satellite Field Day Greetings File:

Greetings from W5MSQ Field Day Satellite station near Katy, Texas, EL-29, with 20 participants, operating class 2A, in the AMSAT-Houston group with the Houston Amateur Television Society and the Houston QRP club. All the best and 73!

Note that the message stated the call, name of the group, operating class, where they were located (the grid square would be helpful) and how many operators were in attendance.

3. Operating Class

Stations operating portable and using emergency power (as per ARRL Field Day rules) are in a separate operating class from those at home connected to commercial power. On the report form simply check off Emergency or Commercial for the Power Source and be sure to specify your ARRL operating class (2A, 1C, etc.).

AND FINALLY...

The Satellite Summary Sheet should be used for submission of the AMSAT Field Day competition and be received by KK5DO (email or postal mail) by 11:59 P.M. CDT, Monday, July 10, 2017. This is earlier than the due date for the ARRL submissions. The preferred method for submitting your log is via e-mail to kk5do at amsat dot org or kk5do at arrl dot net.

You may also use the postal service but give plenty of time for your results to arrive by the submission date. Add photographs or other interesting information that can be used in an article for the Journal.

You will receive an email back (within one or two days) from me when I receive your email submission. If you do not receive a confirmation message, then I have not received your submission. Try sending it again or send it to my other email address.

If mailing your submission, the address is:

Bruce Paige, KK5DO
Director of Awards and Contests
PO Box 1598
Porter, TX 77365-1598.

Certificates will be awarded for the first-place emergency power/portable station at the AMSAT General Meeting and Space Symposium in the fall of 2017. Certificates will also be awarded to the second and third place portable/emergency operation in addition to the first-place home station running on emergency power. A station submitting high, award-winning scores will be requested to send in dupe sheets for analog contacts and message listings for digital downloads.

You may have multiple rig difficulties, antenna failures, computer glitches, generator disasters, tropical storms, and there may even be satellite problems, but the goal is to test your ability to operate in an emergency situation. Try different gear. Demonstrate satellite operations to hams that don't even know the HAMSATS exist. Test your equipment. Avoid making more than ONE contact via the FM-only voice HAMSATS or the ISS, and enjoy the event!

Please follow the following form when submitting results:

AMSAT Satellite Summary Sheet - 2017

Satellite and number of Voice QSO's
(example AO-27 1)

Satellite and number of CW/RTTY/PSK31 etc QSO's
(example AO-07 5)

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Satellite and Up/Downloads
  (example UO-11 3 )

Score Calculation
Total Voice QSO's x 1 =
Total CW/RTTY/PSK31 QSO's x 3 =
Total Up/Downloads x 3 =
Grand Total =

Please provide the following information

Your Field Day Callsign
Your Group Name
ARRL Field Day Classification
ARRL Section
Power Source (Select 1)
      Emergency
      Commercial
Your name and home call
Home address
Any Comments

[ANS thanks Bruce KK5DO for the above information]


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Iceland/Greenland/Faroe Islands on Satellite July 4-19

Gabe Zeifman NJ7H/VE6NJH has finalized plans for an upcoming trip to
Iceland, Greenland, and the Faroe Islands. Once again, this is a trip
with family so radio is not his priority. However, he will put forth
my best effort to give these rare entities and associated grids to
everyone in range.

Gabe will be arriving in Iceland at about 0000Z on July 5 and spend
one night
at the hotel on the airport (access to HP83/84 line).

Gabe reports, "We will be in Iceland until July 10 with numerous
grids in the HP and IP fields possible, no strict plan yet.

"We will continue on to the Faroe Islands July 10-14. I will make an
effort to operate from both IP61 and IP62 while in the Faroes.

"Finally, we will head to Greenland on July 14th staying until the
18th. The destination in Greenland is Ilulissat in GP49. I do not
anticipate any other grids to be activated in Greenland, although if
there is an opportunity I will, but I don't expect any opportunities.
>From GP49 all of North/Central America and Europe should be in range,
along with portions of South America, Asia, and Africa, much of it
even possible on SO-50. I anticipate a nearly perfect horizon to the
west.

"On the 19th we travel back to the US with a several hour connection
in Iceland. I will also have two nights on the beginning and end in
New York City, and July 21-25 in Florida (anyone who needs EM90, hit
me up).

"In exciting news, this very well may be the last DX use of NJ7H.
Don't worry, I am not retired from roving. I am beginning my training
at the FAA as an air traffic controller on July 26th and will be very
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busy with that. I expect facility placement in late October, and I am requesting Alaska. Although I cannot yet be certain, I have been told that I should expect to receive my request.

"QSLing for this trip will be via LoTW. I still need to get some new generic cards printed, but if you need paper I'll get cards printed eventually, just don't expect rush service (I have some from other trips in the backlog, don't worry I havn't forgotten)."

Calls to be used:

Iceland: TF/NJ7H
Greenland: OX/NJ7H
Faroe Islands: OY/NJ7H

[ANS thanks Gabe NJ7H/VE6NJH for the above information]

CAS-4A and CAS-4B Satellites from CAMSAT Launched Thursday

Two CAMSAT’s armature radio payloads piggybacked on the optical remote sensing micro-satellites OVS-1A and OVS-1B have been launched at 11:00BJT on June 15, 2017 at The Jiuquan Satellite Launch Center of China, using CZ-4B launch vehicle. The primary of this launch is a hard X-ray modulation telescope satellite (HXMT).

Satellite Name: CAS-4A/OVS-1A
Architecture: Micro-satellite
Dimensions: 494Lx499Wx630H mm
Mass: 55kg
Stabilization: three-axis stabilization system with its +Y surface facing the earth
Primary Payload: optical Camera with 1.98m resolution
Orbit:
Orbit type : Sun synchronization orbit
Apogee : 524km
Inclination : 43º
Period : 95.1min

Amateur Radio Payload:
Call sign: BJ1SK
VHF Antenna: one 1/4? monopole antenna with max.0dBi gain is located at +Z side
UHF Antenna: one 1/4? monopole antenna with max.0dBi gain is located at -Z side

CW Telemetry Beacon:	145.855MHz	17dBm
AX.25 4.8k Baud GMSK Telemetry:	145.835MHz	20dBm
U/V Linear Transponder Downlink:	145.870MHz	20dBm, 20kHz, Inverted
U/V Linear Transponder Uplink:	435.220MHz	

Satellite Name: CAS-4B/OVS-1B
Architecture: Micro-satellite
Dimensions: 494Lx499Wx630H mm
Mass: 55kg
Stabilization: three-axis stabilization system with its +Y surface facing the earth
Primary Payload: optical Camera with 1.98m resolution

Orbit:
Orbit type: Sun synchronization orbit

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Apogee:      524km
Inclination: 43º
Period:      95.1min

Amateur Radio Payload:
Call sign: BJ1SL
VHF Antenna: one 1/4? monopole antenna with max.0dBi gain is located
  at +Z side
UHF Antenna: one 1/4? monopole antenna with max.0dBi gain is located
  at -Z side
CW Telemetry Beacon:                    145.910MHz   17dBm
AX.25 4.8k Baud GMSK Telemetry:         145.890MHz   20dBm
U/V Linear Transponder Downlink:        145.925MHz   20dBm, 20kHz,
  Inverted
U/V Linear Transponder Uplink:          435.280MHz
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[ANS thanks Alan Kung, BA1DU for the above information]

Updates to AMSAT-NA KEP Distribution for 06-15-2017

ITF-2 is now Tsukuba-OSCAR 89 or TO-89 per Bill Tynan, W3XO, OSCAR Number Administrator.

CAS-4A/OVS-1A and CAS-4B/OVS-1B where launched today (06-15-2017) at 03:00 GMT from the Jiuquan Satellite Launch Center of China using a CZ-4B launch vehicle. See amsat-bb email below from Alan Kung, BA1DU. Nico Janssen, PA0DLO notes that these two new satellites are two of the four NORAD ID CAT 42578-42761.

For now the 06-15-2017 AMSAT-NA KEP Distribution list them as follows:

Name	NORAD CAT ID
Object A	42758
Object B	42759
Object C	42760
Object D	42761

CAS-4A and CAS-4B Satellites from CAMSAT Launched today

Two CAMSAT's armature radio payloads piggybacked on the optical remote sensing micro-satellites OVS-1A and OVS-1B have been launched at 11:00 BJT on June 15, 2017 at The Jiuquan Satellite Launch Center of China, using CZ-4B launch vehicle. The primary of this launch is a hard X-ray modulation telescope satellite (HXMT).

[ANS thanks Ray Hoad WA5QGD for the above information]

Frank Bauer KA3HDO Among Distinguished Public Service Medal Honorees

AMSAT's VP of Human Spaceflight Frank Bauer, KA3HDO, AMSAT V.P. for Human Spaceflight Programs, and ARISS International Chair was among 14 honorees for NASA's 2017 Distinguished Public Service Medal.

NASA Agency Honor Awards Ceremony for 2017 Distinguished Service Medal and Distinguished Public Service Medal Honorees was held Thursday, June 15, 11 a.m. EDT, and broadcast on NASA TV.

During the Agency Honor Awards Ceremony on Thursday, Acting NASA Administrator Lightfoot presented NASA’s most prestigious honors to NASA’s 2017 Distinguished Service Medal Honorees and Distinguished Public Service Medal Honorees.

These NASA Agency Honor Awards recognize individual employees who have made an extraordinary and indelible impact on the agency’s mission success. All of these individuals help enable missions to explore and discover both our world and the universe.

The 2017 Distinguished Service Medal Honorees are: Stephen Cash, Jeffrey Davis, Mike French, Peter Gnoffo, Kelly Hayhurst, Robin Henderson, Michael Hesse, Steven Kempler, Brenda Manuel, Carol Mosier, Ronald Mueller, Dava Newman, Paul Newman, David Radzanowski, Albert Sofge, Ellen Stofan, Patrick Troutman, Tereasa Washington, David Weaver, and Richard Williams.

The 2017 Distinguished Public Service Medal Honorees are: Terry Abel, Frank Bauer, Eric De Jong, Edward Devine, Michael Dorsch, Alan Hargens, Kauser Imtiaz, Roger Launius, Edward Nace, Christopher Russell, John Salisbury, John Sterritt, Forman Williams, and Roberta Wyrick.

For more information on the Agency Honor Award Program, please visit:

https://www.nssc.nasa.gov/awards

[ANS thanks NASA for the above information]

Wireless Institute of Australia reports amateur radio rescue of satellite

I-Inspire-2 is a 20 x 10 x 10cm CubeSat built by the University of Sydney in collaboration with the Australian National University and the University of New South Wales (Sydney). On board the tiny spacecraft is an experiment, part of the European QB50 project, designed to “explore the lower thermosphere, for re-entry research and in-orbit demonstration of technologies and miniaturised sensors”, as reported in earlier editions of the WIA broadcast.

Its operational frequency was coordinated by IARU to be in the satellite segment of the 70cm amateur band.

It was placed in orbit from the International Space Station in late May. The deployment was successful; however there were no signs of life when the ground stations started looking for it. The engineering group quickly tested various scenarios on the engineering model only to come to the conclusion that, due to the extended delay in the deployment, the satellite's battery was likely to be depleted and the satellite was trapped in an endless loop, trying to deploy its antenna.

The engineering group suggested that the satellite is still listening albeit with its antennas in the stowed position. This meant that the satellite command receiver might have difficulty receiving any signals from ground control stations. A set of commands were devised which, if received, would instruct the satellite to wait until the battery is charged before attempting to deploy its antenna. Both UNSW and ANU ground stations transmitted the recovery command to the satellite; however after a week or so of no success it was

decided that more transmitter power was required to overcome the lack of receiver sensitivity caused by the still stowed antenna. A request for assistance was passed to EME operators around the world and many responses were received.

The greatest hope for a successful recovery was thought to be PI 9 CAM using high power and a 25 m dish, normally used for radio astronomy but also EME. They were scheduled to transmit on the weekend of the 10th and 11th of June.

On Sunday the 11th of June, during the morning pass, Rob VK1KW reported a strong signal every 30 seconds on I-Inspire-2's frequency. Dimitris VK1SV who is part of the ANU team, verified reception from home around midnight. The following morning Dimitris drove to the ANU ground station and was able to send commands to the satellite for the first time since it was deployed. Many other radio amateurs around the world also reported reception of the beacon. The satellite had come back to life!

This is a wonderful example of successful collaboration between radio amateurs and the academic community. If a frequency outside the radio amateur band had been used, it is doubtful that the satellite would have been brought back to life.

The crew of I-Inspire-2 wishes to thank all radio amateurs involved and is looking forward to a successful collection of data for the scientific experiment!

I-Inspire-2 official web site:
http://sydney.edu.au/inspire-cubesat/project/index.shtml

(Dimitris Tsifakis VK1SV/VK2COW)

[ANS thanks the VK1WIA news for the above information]

ARISS News

+ A Successful contact was made between Space Center Houston, Houston, TX, USA and Astronaut Jack Fischer K2FSH using Callsign OR4ISS.
  The contact began 2017-06-13 15:19 UTC and lasted about nine and a half minutes. Contact was Telebridge via ON4ISS.
  ARISS Mentor was Gene K5YFL.

Upcoming ARISS Contact Schedule

Sochi, Russia, direct via TBD
The ISS callsign is presently scheduled to be RSØISS
The scheduled astronaut is Fyodor Yurchikhin RN3FI
Contact is a go for Sat 2017-06-17 15:10 UTC

Ufa, Russia, direct via TBD
The ISS callsign is presently scheduled to be RSØISS
The scheduled astronaut is Fyodor Yurchikhin RN3FI
Contact is a go for Fri 2017-06-23 08:25 UTC

SCaN/Glenn Research Center, Brook Park, OH, and the Girl Scouts of North East Ohio direct via NA8SA
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Jack Fischer K2FSH

Contact is a go for: Fri 2017-06-23 14:25:09 UTC
Note that this contact should be audible direct over parts of the
Eastern USA.

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above
information]

Satellite Shorts From All Over

+ Satellite DX operation in the BELIZE

BELIZE, V3. Look for David, KG5CCI to be active as V31CI from Ambergris Caye (NA-073), from June 21 to 27, including Field Day. Listen for him on Satellites, 6 Meters (digital and SSB) and possibly on the HF bands. QSL direct to KG5CCI.

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, AA8EM
aa8em at amsat dot org